

Early Childhood Oral Health

PRIMARY
CARE
PROVIDERS:

What You Need to Know About Fluoride Varnish and How You Can Promote Early Childhood Oral Health



Help prevent or stop tooth decay

NYC
Health

Michael R. Bloomberg
Mayor
Thomas Farley, M.D., M.P.H.
Commissioner



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Dear Colleague,

I am writing to advise you that Medicaid reimbursement is now available for the application of fluoride varnish to children's teeth by pediatric primary care providers (PCPs) in New York State. This simple procedure can be integrated into regular office examinations and will help prevent early childhood caries.¹

Oral health is integral to general health: oral diseases and disorders affect health and well-being throughout life.² Dental caries — the #1 chronic disease affecting young children — is largely preventable and may be reversible if found early.¹ Dental caries progresses rapidly and often goes untreated.³

Fluoride plays an important role in preventing dental caries. New York City water is fluoridated, but additional topical applications of fluoride have proven to be effective in further reducing the onset of caries, especially in young children.

Because infants and younger children are more likely to see their physician than a dentist, PCPs are uniquely positioned to monitor and promote good oral health.^{3,4} All PCPs should conduct periodic oral health examinations as part of routine pediatric visits. Children should be referred to a dental home by age 1, and PCPs can partner with their patients' dentist to coordinate preventive oral health care.¹

I encourage you to obtain training in pediatric oral health risk assessment and fluoride varnish application. Online training in the application of fluoride varnish and resources for pediatric oral health care providers are available at the New York State Department of Health Web site at: www.nyhealth.gov/prevention/dental/child_oral_health_fluoride_varnish_for_hcp.htm.

Thank you for your commitment to promoting children's oral health.

Sincerely,

Thomas Farley, M.D., M.P.H.
Commissioner

Promoting Early Childhood Oral Health

Early childhood caries is a severe, rapidly progressing form of tooth decay that affects teeth that erupt first and are least protected by saliva. Caries in a young child can lead to pain, early tooth loss, infection, and increased risk of adult tooth decay. You can prevent or stop the progression of early childhood caries by:¹

- Applying fluoride varnish (5% sodium fluoride in a natural colophonium resin) 2–4 times a year, depending on child's risk for caries.
- Counseling parents about the importance of good oral hygiene, the prevention of early childhood caries, tooth eruption, and painful teething.
- Discouraging putting the infant to bed with a bottle, and encouraging only water if necessary to aid in getting the infant to sleep.
- Encouraging wiping the child's gums and teeth with a damp cloth after each feeding, especially before bedtime and naps and after any nighttime feedings.
- Promoting healthy eating behaviors and limited consumption of juices and sugar-sweetened beverages and foods.
- Discussing nutritive (breast, bottle) vs nonnutritive (pacifier, fingers, or bottle nipple if not feeding) sucking and its effect on dentofacial development.
- Referring to a dentist by the time a child is 1 year old.

The Oral Health Examination

For infants and children under 3 years of age:

- Establish a knee-to-knee position with the caregiver. The child's head should be in your lap and the child's legs should be around caregiver's waist. The caregiver can help by holding the child's hands on top of the navel.

For children 3 years of age and older:

- Have the child either lie flat on an examination table or sit in front of the caregiver, while both are facing you, so that the caregiver can help position and steady the child.

Lift the lip to inspect soft tissue and teeth for signs of:

- Inadequate oral hygiene such as plaque and debris on the teeth.
- Whether tooth eruption and loss are proceeding according to schedule (**Fig. 1**), and dental crowding.
- Swelling, redness, and irregularities such as lesions, bumps, or ulcers in the mouth.

Figure 1. Eruption and shedding patterns of primary teeth.

Used with permission of the American Academy of Pediatrics.

	Upper Teeth	Erupt	Shed
	Central incisor	8–12 months	6–7 years
	Lateral incisor	9–13 months	7–8 years
	Canine (cuspid)	16–22 months	10–12 years
	First molar	13–19 months	9–11 years
	Second molar	25–33 months	10–12 years
	Lower Teeth	Erupt	Shed
	Second molar	23–31 months	10–12 years
	First molar	14–18 months	9–11 years
	Canine (cuspid)	17–23 months	9–12 years
	Lateral incisor	10–16 months	7–8 years
	Central incisor	6–10 months	6–7 years

- Dental caries such as white spots along the gum line or brown spots indicating moderate decay (Fig. 2).



Figure 2. Signs of childhood caries: (top) early decay: white spots; (bottom) later decay: brown spots. Used with permission of the American Academy of Pediatrics.

Assessing Caries Risk

During the visit,

- Ask the mother about her own caries experience and if she currently has active decay. If there are other children in household, ask about their caries experience.
- Ask about caries symptoms such as sensitivity to heat/cold, pain, difficulty chewing, poor weight gain, infections, abscesses, or difficulty sleeping.

- Ask about other risk factors for caries, such as sleeping with bottles, being fed through the night, or children who have special health care needs (see **Table**).
 - Assess child's exposure to fluoride (New York City fluoridated tap water vs bottled water).
 - Use the AAPD Caries-Risk Assessment Tool to evaluate risk for caries (**Table**).
- Further information on oral health risk assessment can be obtained at www.aap.org/oralhealth/cme.

Table. Caries Risk Assessment Tool.

	Low Risk	Moderate Risk	High Risk
Clinical Conditions	<ul style="list-style-type: none"> • No carious teeth in past 24 months • No enamel caries "white spot lesions" • No visible plaque; no gingivitis 	<ul style="list-style-type: none"> • Carious teeth in the past 24 months • 1 area of enamel caries "white-spot lesion" • Gingivitis 	<ul style="list-style-type: none"> • Carious teeth in the past 12 months • More than 1 area of enamel caries "white spot lesions" • Visible plaque on front teeth • Radiographic enamel caries • High titers of mutans streptococci • Wearing dental or orthodontic appliances • Enamel hypoplasia
Environmental Characteristics	<ul style="list-style-type: none"> • Optimal systemic and topical fluoride exposure • Consumption of simple sugars or foods strongly associated with caries initiation primarily at mealtimes • Regular use of dental care in the established dental home 	<ul style="list-style-type: none"> • Suboptimal systemic fluoride exposure with optimal topical exposure • Occasional between-meal exposures to simple sugars or foods strongly associated with caries • Caregiver of mid-level socioeconomic status (ie, eligible for school lunch program or SCHIP) • Irregular use of dental services 	<ul style="list-style-type: none"> • Suboptimal topical fluoride exposure • Frequent (ie, 3 or more) between-meal exposures to simple sugars or foods associated strongly with caries • Caregiver of lower-level socioeconomic status (ie, eligible for Medicaid) • No usual source of dental care • Active caries present in the mother
General Health Conditions			<ul style="list-style-type: none"> • Children with special health care needs* • Conditions impairing saliva composition/flow

*Children with special health care needs are those who have a physical, developmental, sensory, behavioral, cognitive, or emotional impairment or limiting condition that requires medical management. Chart based on the American Academy of Pediatric Dentistry Caries Risk Assessment Tool. For more information on using the tool, refer to www.aapd.org/foundation/pdfs/cat.pdf. Used with permission of the American Academy of Pediatrics.

- Provide anticipatory guidance including oral hygiene instructions.
 - Parents can model good oral hygiene by brushing twice a day with a toothpaste that contains fluoride and flossing daily.
- Refer to a dental home by the child's first birthday^{1,5} and establish collaborative relationship with dentists to coordinate children's preventive and routine care.¹

Applying Fluoride Varnish

Fluoride varnish may be applied 2 to 4 times a year for children up to 7 years of age, depending on the child's risk for caries.

Fluoride varnish is easy to apply (**Fig. 3**) and can prevent, arrest, and even reverse early cavity formation.^{6,7} It also strengthens teeth, renews high levels of fluoride in superficial enamel, and helps slow or reverse demineralization.⁸

The varnish is colorless or caramel colored, forms a sticky layer on the tooth that hardens on contact with saliva, and penetrates the tooth enamel. It should be allowed to remain on the teeth overnight. Risk of ingestion and toxicity is very low, as varnish hardens on the teeth, and only a small amount per application is required. Do not apply fluoride varnish if ulcerative gingivitis, stomatitis, or open soft tissue lesions are present, and do not use in patients with known sensitivity to colophonium (pine resin) or pine nuts. In very rare instances, dyspnea has occurred in asthmatic children. Consult manufacturers' product instructions for complete safety information.

- Step 1:** Remove excess saliva and plaque from the teeth with a 2 x 2 sterile gauze sponge.
- Step 2:** Apply fluoride with disposable applicator on all tooth surfaces. The varnish will harden immediately once it comes in contact with saliva.

Advise the caregiver:

- Child should not brush for the rest of the day.

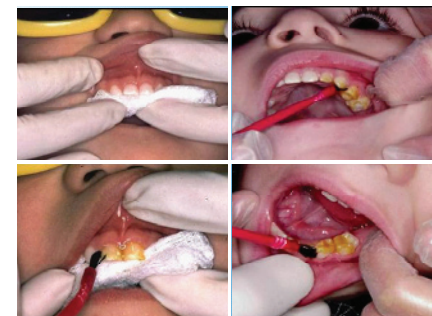


Figure 3. Applying fluoride varnish. Used with the permission of the American Academy of Pediatrics.

- Child should eat a soft, nonabrasive diet for the rest of the day. No hot drinks.
- If caramel-colored fluoride varnish is used, the teeth may be temporarily yellow and/or caramel colored, but the discoloration will go away once the teeth are brushed the next day.
- An instructional fact sheet for parents can be ordered by calling 311 (**Resources**).

Reimbursement

In New York State, a maximum of four (4) fluoride varnish applications per year will be covered for children from birth until 7 years of age.

- **Medicaid fee-for-service:** Providers will be reimbursed up to \$30.00 per application. Prior approval is NOT required under Medicaid fee-for-service.
- **Medicaid managed care:** Reimbursement will be in accordance with provider agreements. Contact the Provider Relations office of your participating plan(s) for information.

Procedure code "D1206" should be used by all health care providers.

For questions about billing, contact the NYS Department of Health Division of Provider Relations and Utilization Management, Dental Bureau at **800-342-3005, option 2**.

For questions about Medicaid managed care, contact the NYS Department of Health Division of Managed Care at **518-473-0122**.

Ordering Fluoride Varnish

Fluoride varnish is available both in tubes for multiple applications (individual disposable applicator brushes must be purchased separately) and in prepackaged single-unit doses that include a disposable applicator brush.

Many companies supply fluoride varnish,^a including:

- Cavity Shield, in single-dose units with built-in applicators (Omni Products at 800-445-3386 or 800-634-2249)
- Duraphat (Colgate Oral Pharmaceuticals at 800-225-3756, 800-226-5428, or 800-2-COLGATE)
- Duraflor (Medicom at 800-361-2862)
- VarnishAmerica (Medical Products Laboratories at 800-523-0191, or www.medicalproductslaboratories.com/public-health/varnishamerica.html)

Additional lists of fluoride varnish products and dental supply companies can be found on the American Academy of Pediatrics Web site at: www.aap.org/oralhealth/pdf/fluoride-varnish-manufacturers.pdf.

^a Use of product names is for informational purposes only and does not imply endorsement by the New York City Department of Health and Mental Hygiene.

Resources

Fluoride Varnish Information:

- American Dental Association Evidence-Based Dentistry: <http://ebd.ada.org/ClinicalRecommendations.aspx>

Acknowledgments

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<http://jada.ada.org/cgi/reprint/137/8/1151>

- New York State Department of Health, Bureau of Dental Health: www.nyhealth.gov/prevention/dental/child_oral_health_fluoride_varnish_for_hcp.htm
- New York State Oral Health Coalition: <http://nysohc.org/FluoridationResources.aspx>

Training in Oral Health Assessment:

- A Health Professional's Guide to Pediatric Oral Health Management: www.mchoralhealth.org/PediatricOH/index.htm
- American Academy of Pediatrics (AAP): Oral Health Initiative: Oral Health Risk Assessment Training for Pediatricians and Other Child Health Professionals: www.aap.org/oralhealth/cme
- Other AAP Oral Health Initiative Oral Health Trainings & Videos (free and low cost): www.aap.org/oralhealth/links-training.cfm
- Bright Futures in Practice: Oral Health Pocket Guide: www.mchoralhealth.org/pocket.html

General:

- American Academy of Pediatrics – Oral Health: www.aap.org/healthtopics/oralhealth.cfm
- Lewis CW, Boulter S, Keels MA, et al. Oral health and pediatrics: results of a national survey. *Acad Pediatr*. 2009;9(6):457-461. <http://download.journals.elsevierhealth.com/pdfs/journals/1876-2859/PIIS1876285909002654.pdf>

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8. American Academy of Pediatrics. Oral Health Initiative. Oral health risk assessment: training for pediatricians and other child health professionals. www.aap.org/oralhealth/cme.

Call 311 to order Fluoride Varnish Fact Sheets for Parents

Ask your pediatrician about fluoride varnish

HELPS PREVENT CAVITIES

What is fluoride varnish?

Fluoride varnish is a coating that is painted on a child's teeth to prevent or stop cavities. If your child does not see a dentist regularly, you should ask your pediatrician about fluoride varnish.

Why is fluoride varnish recommended for children's teeth?

Cavities can cause pain and infections that can be bad for children's general health and lead to problems with eating, speaking, playing, and learning. Fluoride varnish makes teeth stronger, stops cavities from getting bigger, and prevents new cavities from forming.

Is fluoride varnish safe?

Yes. Fluoride varnish is safe for children of any age; it can be used on babies from the time their first teeth come in.

How is fluoride varnish put on teeth?

Fluoride varnish is painted on teeth with a brush. A trained doctor, nurse, or dentist can do it easily and quickly. There is no pain and the varnish does not taste bad. The varnish may change the color of the teeth just after it is applied. Some kinds of varnish will make the teeth look yellowish, other kinds may make the teeth look less shiny. These changes are normal, and will go away when you brush your child's teeth the next day.

How long does fluoride varnish last?

The varnish sticks to the teeth until it is brushed away the next day, but the fluoride keeps working for several months to protect teeth. Varnish works best if it is painted on teeth 2 to 4 times a year, as recommended by your child's health care provider.



HELPFUL TIPS FOR PARENTS AFTER FLUORIDE VARNISH APPLICATION

- Wait until the next day to brush your child's teeth.
- Give your child only soft foods for the rest of the day after treatment.
- Avoid giving your child hot, hard, or sticky foods for 24 hours after the fluoride varnish application. Hard or chewy foods might chip the varnish off.

Children should see a dentist by their first birthday and visit a dentist at least once a year.



INFORMATION FOR PARENTS



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